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ABSTRACT

One of the most consistent empirical findings in the increasing research on the sociology of sport revealed that white urban male high school athletes manifest higher-level educational orientations than their non-athlete counterparts. This study expanded this empirical literature by assessing the nature of the athletic participation and educational aspiration relationship for a sample of rural, white male athletes in the deep South (Louisiana). Group interviews were conducted at 24 high schools, resulting in a final sample of 3,245 youths. Complete data on all variables included in this study were secured for 884 white males. The findings suggested that participation in interscholastic high school athletics is moderately related to level of educational aspiration for both rural and urban youths. The results from a series of partial correlations suggested that a substantial portion of the original educational aspiration-athletic participation relationship was due to the influence of parents' education and students' academic performance. Additional regression and covariance analyses revealed that athletic participation had relatively the weakest effects of all predictor variables within each residence category and that this rather weak effect was comparable for each residence category. Statistical tables were also presented. (FF)

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Interscholastic Athletic Participation and the Formation of Educational Goals: A Rural-Urban Comparison[1]

by

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One of the most consistent empirical findings in the steadily increasing research literature in the sociology of sport reveals that white urban male high school athletes manifest higher-level educational orientations than their non-athlete counterparts[2] (Bend, 1968; Buhrmann, 1968; Rehberg and Schafer, 1968; Schafer and Rehberg, 1970; and Spreitzer and Pugh, 1973). Many of these studies have found that even after controls were exerted for variables, such as educational encouragement of parents, socioeconomic status and academic performance, the original relationship between athletic participation and educational orientations still holds (Rehberg and Schafer, 1968; Schafer and Rehberg, 1970; Spreitzer and Pugh, 1973). This study attempts to expand the

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[2]The literature concerning other sociological and psychological variations between athletes and non-athletes appears to be rather inconclusive. Findings do exist which suggest that athletes are characterized by more outgoing personality characteristics than non-athletes (Schendel, 1965; Kane and Warburton, 1966), higher grade point averages (Schafer and Armer, 1968), and less delinquency (Schafer, 1969). However, other research reports contend that athletes, as a group, score lower on intelligence tests than non-athletes (Slusther, 1964); that athletics may have negative psychological consequences for participants (Biddoulph, 1954; French, 1970); and that the evidence concerning most athlete - non-athlete sociological and psychological differences is, at best, limited and indeterminate (Edwards, 1973).

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empirical literature in this area by assessing the nature of the athletic participation and educational aspiration relationship for a sample of rural and white male athletes residing in the deep-South. Previous studies have been restricted to white urban male youth residing in the Northeastern sector of the United States. Furthermore, this research summary attempts to expand previous studies in this area by assessing the magnitude of the effect of athletic participation on aspiration relative to other variables and across residential origins.

Theoretical Orientation

Research on the relationship between athletic participation and educational aspirations requires pulling together two distinct, but related, areas of inquiry in sociology -- the sociology of sport and status attainment research (Edwards, 1973 and Haller and Portes, 1973). As originally noted by Schafer (1968), the higher level educational orientations observed among high school athletes may be differentially interpreted. First, the role and visibility of the high school athlete may afford him more personal academic encouragement and counseling from coaches, teachers, and peers. Second, the self-discipline and control characteristic of athletic competition may be retained by the athlete in his academic activities. Third, the rewards of interscholastic athletic competitions, in terms of college athletic scholarships may influence and motivate athletes to work for good grades and engender inflated educational aspiration levels (Spady, 1970). Fourth, it has been frequently noted that the high school athlete's enhanced popularity may lead to positive self-conceptions, which have consequences for behavior in the academic setting. Finally, research also indicates that the athlete is often accorded status in the "leading crowd" in the high school. Membership in this collectivity is thought to bring the athlete in contact with students who are predominantly from middle-class social origins and who have educational orientations which most often include college attendance (Rehberg and Schafer, 1968; Rehberg, 1969).

Research on status attainment processes has expanded rapidly in the last five years. Recent summaries of this body of literature indicate that most variables included in previous athletic studies are important for explicating the sequence of causal events which leads eventually to the attainment of educational and occupational statuses (Carter and Carter, 1972; Sewell and Hauser, 1972; Gasson, Haller and Sewell, 1972; Haller and Portes, 1973). In the context of status attainment research, it can be contended from previous studies that interscholastic athletic participation in high school facilitates the formation of high-status educational goals.

Spady (1970) has provided the only longitudinal data on educational achievements of athletes, which indicates that athletic participation may engender inflated aspirations. Along these lines Spady (1970:697) has stated:

> "...Although sports appear to stimulate aspirations by virtue of its visibility and apparently short-lived status

> rewards, it does not by itself provide the skills and resources necessary for subsequent success in college."

Spreitzer and Pugh (1973) have also presented cross-sectional data which suggests that "school value-climate and perceived peer status" are important intervening variables between athletic participation and educational aspirations.

In summary, studies to date suggest that athletic participation is related to educational aspirations, net of the influence of social origins, academic performance and parental educational encouragement. These results have been theoretically explained in terms of characteristics associated with the role of the student-athlete. However, the only longitudinal evidence in this area, albeit limited, indicates that athletic participation may facilitate aspiration formation, but at the same time may not facilitate eventual educational achievement (Spady, 1970). These findings, taken together, suggest that the original studies finding a relationship between athletic participation and aspirations may have overestimated its magnitude. This contention is based in part, on the regional characteristics of previous samples and types of analysis conducted on these data-sets.

Methodological Procedures

The Sample. The data for this study were part of a larger study on the value orientations of Louisiana youth. A stratified, proportionate, random cluster sample of all high school seniors residing in the state was collected in November, 1970. Group interviews were conducted at 24 high schools, resulting in a final sample of 3,245 youth. Complete data on all variables included in this study were secured for 884 white males. Of these respondents, 254 classified themselves as being rural residents, while 630 classified themselves as being urban residents, according to Census criteria. A correlational analysis revealed that no appreciable bias was introduced due to deletion of respondents who had data missing on one or more analysis variables.[3]

Variable Operationalization: The variables utilized in this study were operationalized in the following manner:

> Father's education: determined by the students' response to a question which asked how many years of formal education did his father complete. Response alternatives ranged from 00 (no school) to 20 (Doctors' Degree, M.D., Ph.D., etc.).
>
> Mother's education: determined in a manner identical to father's education.
>
> Grade Point Average: This variable was operationalized in

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[3]Tables will be furnished upon request.

terms of students' reports of final grade received for an exhaustive list of possible high school courses. Students' grade point averages were calculated by research workers. Actual grade point averages were obtained from school records for only 50 per cent of the sample. The zero-order correlation between actual and reported grades was found to be .788. Reported grade point average is utilized in order to minimize sample attrition.

Parents' educational encouragement: determined by the students' assessment of how much encouragement he had received from his parents to attend college. Response alternatives ranged from 1 (strongly discouraged) to 5 (strongly encouraged).

Educational aspiration: This variable was obtained from student responses to the following question: "How much education do you desire and will actively attempt to achieve?" Responses were coded as follows: 0 = none after high school; 1 = graduate from a vocational-technical school; 2 = some college, but do not plan to graduate; 4 = B.A. degree; 6 = Masters' degree; 8 = Doctorate degree or equivalent professional degree (M.D., D.D.M., etc.).

Athletic Participation: This variable was determined by the students' response to the following item: "Do you participate in high school athletics?" Response alternatives were simply Yes or No.

Data Analysis: Previous studies on athletic participation and educational aspirations have utilized correlational techniques in their data analyses. In order to facilitate comparability of our findings with previous studies, initially we employ a partial correlation analysis. We do expand our analysis by including a regression analysis of the data. Furthermore, differences in effects of the predictor variables by residence are assessed in terms of a covariance analysis. The utility of parametric techniques for ordinal level data has been noted by Labovitz (1967; 1970) and will not be treated in detail here. All analyses are applied after residential controls have been exerted in order to facilitate our comparison of rural and urban athletes.

Findings

Table 1 presents the means, standard deviations, and zero-order correlations for variables separately by residence categories. A quick look at this table reveals that comparable means and standard deviations obtained for the variables across residence categories. Additionally, and most important, the strength of the relationship between athletic participation and educational aspirations initially appears to be considerably stronger for the rural respondents ($r = .24$ rural; $r = .12$ urban). However, athletic participation was found to manifest stronger relationships with other variables for the rural respondents, suggesting

that this original zero-order relation may be partly spurious. The findings presented in Table 1 for the rural respondents compare favorably with zero-order relationships obtained in earlier investigations. Rehberg and Schafer (1968) reported a gamma of .28 for their study, while Spreitzer and Pugh (1973) obtained a gamma of .26 for their sample. The zero-order correlation of .12 for our urban respondents is the smallest correlation coefficient found in the literature to date between these variables.

In order to more fully grasp the nature of the zero-order correlations obtained in Table 1, a series of partial correlations are presented in Table 2. A glance at the first-order partials indicate that the original zero-order relationship between athletic participation and aspirations is reduced substantially for the rural respondents when controls are exerted for academic performance. The largest reduction for the urban respondents is derived when controls are applied for mother's education.

The second-order partials reveal a substantial reduction in the original relationship for the rural respondents when father's education and academic performance are simultaneously controlled. The original correlation coefficient of .24 is reduced to .11. For the urban respondents, the original relationship of .12 is reduced to .07 when mother's education and academic performance are controlled. The third-order partial reveals that when parents' educational level and students' academic performance are controlled, a correlation of .07 remains for the urban respondents, while a correlation of .10 obtains for the rural respondents.

The results of the partial correlation analysis indicate that the original zero-order correlation between athletic participation and educational aspirations is partly accounted for by the other variables included in this study. Parents' encouragement was the only variable that did not substantially reduce the original relationship for both residence categories. Academic performance for rural youth and mother's education for urban youth were, singularly, the variables which reduced the original relationship the most. However, the third-order partials reveal that the original relationship, although reduced, is not totally spurious in terms of the variables included in the analysis. In order to ascertain a comparison of the magnitude of the effects of athletic participation on aspirations a regression analysis was carried out and the results are presented in Table 3.

A multiple correlation of .534 for rural and .570 for urban obtained from the regression analysis. Thus the five predictor variables, taken together, account for approximately 29% of the variance in rural youths' educational aspirations and approximately 31% of the variance in urban youths' educational aspirations. Although obtaining significance for both residence categories, a look at the standardized coefficients reveals that the athletic participation variable had comparatively the smallest effect within each residence group. The fact that the significance level differs for athletic participation by residence group (.025

urban vs. .05 rural) in all probability reflects the larger subsample size of the urban control category.

A look at the unstandardized coefficients suggests that variable effects across control categories were relatively similar with one exception -- the effect of mother's education. Mother's education was found to be significantly related only to rural respondents' educational aspirations. An effort to access residential variations in variable effects was accomplished through a form of covariance analysis. The covariance model takes the form:

$$Y = f(X_1, X_2, X_3, X_4, X_5, D, DX_1, DX_2, DX_3, DX_4, DX_5)$$

where:

Y = dependent variable predicted by $X_1 \ldots X_5$ (educational aspirations)
X_1 = first predictor variable
X_2-X_5 = second predictor variable, third predictor variable, etc.
D = dummy variable coded 0,1; i.e., residence
DX_1 = product of X_1 and dummy variable for each observation
DX_2-DX_5 = product of X_2 and dummy variable for each observation, etc.

This model was run as a regression model and interpretation of the values in Table 4 are rather straight forward. If the regression slope associated with the dummy variable is significant, the intercepts between the two groups differ when Y is regressed on X_1, X_2, etc. for each group. If the slope associated with either of the product terms is significant than the slopes differ between Y and the associated X when Y is regressed on X_1 and X_2 separately for the groups represented by the dummy variable.

The covariance analysis indicates that the slope of the regression coefficients for only one predictor variable differs significantly by residence category -- mother's education. This finding substantiates the visual interpretation of residential differences in variable effects noted above.

Summary and Conclusions

This study has attempted to assess the role of athletic participation for engendering high-status educational aspirations among white high-school males from both rural and urban social origins. Previous empirical studies indicate that athletic participation has a moderate positive relationship with educational aspirations, even after controls for relevant variables have been introduced. The findings of this study suggest that participation in interscholastic high-school athletics is moderately related to level of educational aspiration for both rural and urban youth. The results from a series of partial correlations suggest that a substantial portion of the original E.A. - A.P. relationship was due to the

influence of parents' education and students' academic performance. The results of additional regression and covariance analyses reveal that athletic participation has relatively the weakest effects of all predictor variables within each residence category and that this rather weak effect is comparable for each residence category.

These findings tend to contradict previous empirical studies which have been limited to partial correlation analyses. For example, when controls for all relevant predictor variables were applied, the resultant correlation between athletic participation and educational aspirations was .10 for rural and .07 for urban youth. Previous studies allowing some comparability have found this correlation to be .24 (Rehberg and Schafer, 1968) and .21 (Spreitzer and Pugh, 1973). Ostensibly, the relationships obtained in this study were considerably weaker. The effects of athletic participation on educational aspirations, holding all other variables constant, were found to be significant, but rather weak predictors for both residence categories. Academic performance, parental educational encouragement and father's education were found to be the strongest predictors of aspirations.

These findings indicate that athletic participation may not be as important a determinant of educational aspirations as originally thought. Obviously, other important control variables such as mental ability, goal impedance and significant other influence, which were not available for this study, may further reduce the original relationship observed.

Particularly, in light of the results of the regression analysis, further studies should attempt to assess the effect of interscholastic athletic participation on aspirations. As noted earlier this effect was found to be quite small for our sample. Furthermore, concern should be directed to more theoretically viable considerations, such as the role of "athletic success" for the formation of educational goals. Additionally, future inquiry concerning the importance of athletics for the educational orientations of Black youth should be explored, since this minority population has traditionally utilized sports as an avenue for social mobility (Edwards, 1973).

TABLE 1: MEANS, STANDARD DEVIATIONS AND ZERO-ORDER CORRELATIONS FOR VARIABLES BY RESIDENCE.

URBAN N=630	$\bar{X}$	SD	FATHERS ED.	MOTHERS ED.	PARENTS ENC.	ACADEMIC PERF.	ATHLETIC PART.	ED. ASP.	SD	$\bar{X}$	RURAL N=254
FATH ED	12.62	3.66	1.00	.561	.177	.262	.205	.366	3.76	10.67	FATH ED
MOTH ED	12.12	2.80	.499	1.00	.218	.208	.169	3.66	2.90	11.34	MOTH ED
PARENT ENC	4.39	.80	.254	.240	1.00	.175	.047	.230	.84	4.14	PARENT ENC
ACA PERF	2.60	.62	.127	.171	.224	1.00	.263	.422	.72	2.58	ACA PERF
ATH PART	.56	.50	.056	.145	.032	.076	1.00	.238	.49	.59	ATH PART
ED ASP	4.33	2.34	.329	.278	.447	.369	.120	1.00	2.55	3.46	ED ASP

TABLE 2: PARTIAL CORRELATION ANALYSIS OF VARIABLES BY RESIDENCE

	URBAN	RURAL
ZERO-ORDER		
Educational Aspirations and Athletic Participation	.12	.24
FIRST-ORDER PARTIALS		
E.A. and A.P. Controlling for Mother's Education	.08	.19
E.A. and A.P. Controlling for Father's Education	.11	.18
E.A. and A.P. Controlling for Parents' Encouragement	.12	.23
E.A. and A.P. Controlling for Academic Performance	.10	.15
SECOND-ORDER PARTIALS		
E.A. and A.P. Controlling for Father's and Mother's Education	.08	.17
E.A. and A.P. Controlling for Father's Education and Academic Performance	.09	.11
E.A. and A.P. Controlling for Mother's Education and Academic Performance	.07	.12
THIRD-ORDER PARTIAL		
E.A. and A.P. Controlling for Father's and Mother's Education and Academic Performance	.07	.10

TABLE 3: REGRESSION COEFFICIENTS IN STANDARDIZED AND UNSTANDARDIZED FORM FOR PREDICTOR VARIABLES BY RESIDENCE.[A]

Independent Variable and Control Category	Educational Aspiration
RURAL	
Father's Education	.115** (.169)
Mother's Education	.121** (.138)
Parental Educational Encouragement	.344** (.113)
Academic Performance	1.084** (.304)
Athletic Participation	.471* (.095)
R	.534
URBAN	
Father's Education	.116** (.182)
Mother's Education	.045 (.054)
Parental Educational Encouragement	.961** (.328)
Academic Performance	.979** (.258)
Athletic Participation	.339** (.072)
R	.570

**P .025 - one-tailed Test
* P .05 - one-tailed Test
[A] Standardized coefficients are in parentheses.

TABLE 4: COVARIANCE ANALYSIS BETWEEN GROUPS TREATING RESIDENCE AS A CATEGORIC VARIABLE.[A]

TERM	COEFICIENT	T-VALUE
R X FE	-.125	-.845
R X ME	.393	2.216*
R X PE	.101	.626
R X A.Per.	-.098	1.377
R X A.Part.	.017	.285

*Significant at .05 level of confidence

[A] Other values are actually meaningless for interpretation, but are available upon request from the senior author

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